

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: SUNAPEE LAKE, LITTLE	Lake Area (ha): 191.01
Town: NEW LONDON	Maximum depth (m): 13.1
County: Merrimack	Mean depth (m): 4.4
River Basin: Connecticut	Volume (m ³): 8449500
Latitude: 43°26'03" N	Relative depth: 0.8
Longitude: 72°01'08" W	Shore configuration: 1.94
Elevation (ft): 1220	Areal water load (m/yr): 4.94
Shore length (m): 9500	Flushing rate (yr ⁻¹): 1.10
Watershed area (ha): 1605.8	P retention coeff.: 0.66
% watershed ponded: 1.9	Lake type: natural w/dam

BIOLOGICAL:

12 January 1995

21 July 1994

DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 55%	CHRYSOSSPHAERELLA 30%
	#2	RHIZOSOLENIA 20%	TABELLARIA 20%
	#3	UROGLENOPSIS 20%	ASTERIONELLA 10%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			3.39
DOM. ZOOPLANKTON (% TOTAL)	#1	NAUPLIUS LARVA 38%	NAUPLIUS LARVA 24%
	#2	CYCLOPOID COPEPOD 16%	KERATELLA 18%
	#3		
ROTIFERS/LITER		24	19
MICROCRUSTACEA/LITER		35	30
ZOOPLANKTON ABUNDANCE (#/L)		61	51
VASCULAR PLANT ABUNDANCE			Scat/Common
SECCHI DISK TRANSPARENCY (m)			4.8
BOTTOM DISSOLVED OXYGEN (mg/L)		10.7	0.9
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 5.4
 Hypolimnion volume (m³): 498500
 Anoxic volume (m³): 13500

CHEMICAL:

**Lake: SUNAPEE LAKE, LITTLE
Town: NEW LONDON**

	12 January 1995		21 July 1994		
DEPTH (m)	3.5	7.0	2.0	6.5	10.5
pH (units)	6.4	6.1	6.8	6.4	6.2
A.N.C. (Alkalinity)	4.4	4.6	3.8	3.6	4.2
NITRATE NITROGEN	< 0.10	< 0.10	< 0.05		0.07
TOTAL KJELDAHL NITROGEN	0.23	0.31	0.16	0.12	0.21
TOTAL PHOSPHORUS	0.006	0.008	0.008	0.015	0.009
CONDUCTIVITY (μ mhos/cm)	66.9	68.6			
APPARENT COLOR (cpu)	21	21			
MAGNESIUM			0.60		
CALCIUM			3.4		
SODIUM			7.7		
POTASSIUM			0.57		
CHLORIDE	13	13	13		12
SULFATE	6	7	6		6
TN : TP	38	39	20		31
CALCITE SATURATION INDEX			3.4		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1994

D.O. S.D. PLANT CHL TOTAL CLASS

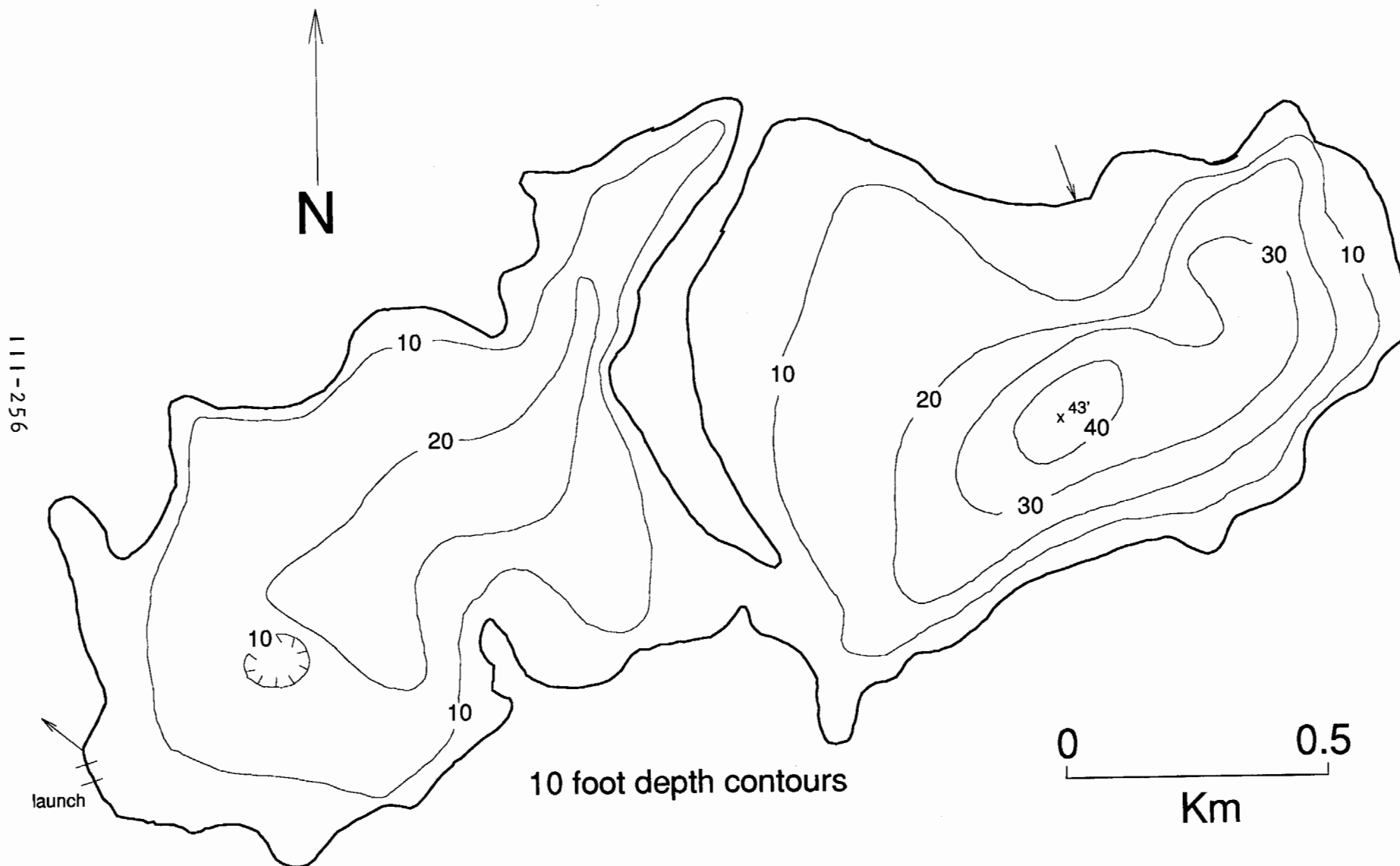
3	2	2	0	7	Meso.
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COMMENTS:

1. This lake was previously surveyed and classified in 1979. There was no change in classification and little change in water quality between the two years.
2. There was a fishy smell under the ice in the winter, probably due to healthy populations of Asterionella and Uroglenopsis in the phytoplankton.
3. Slightly elevated sodium and chloride levels suggest some salt runoff into the lake.

Little Sunapee Lake

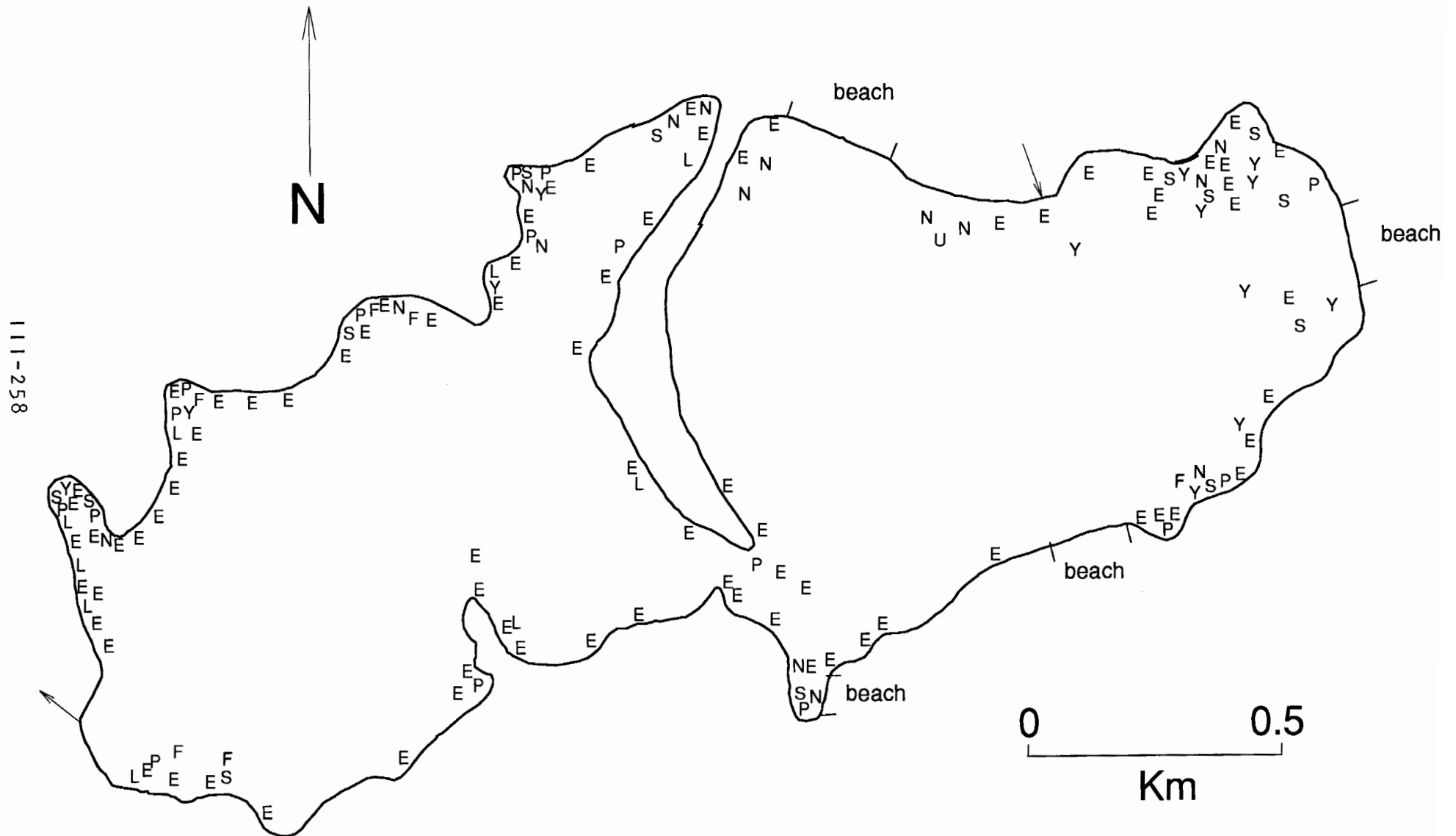
New London



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Little Sunapee Lake

New London



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